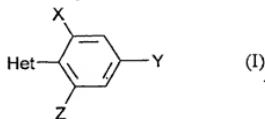


Patent Claims

1. Compounds of the formula (I)



in which

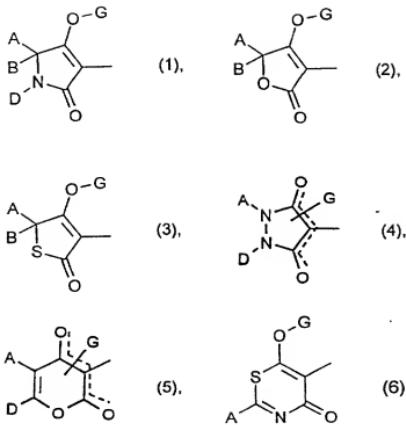
5        X        represents halogen,

Y        represents halogen or alkyl and

Z        represents halogen or alkyl,

with the proviso that always one of the radicals Y and Z represents halogen and the other represents alkyl,

10        Het        represents one of the groups



in which

A represents hydrogen, or represents alkyl, alkenyl, alkoxyalkyl, polyalkoxyalkyl or alkylthioalkyl, each of which is optionally substituted by halogen, or represents in each case saturated or unsaturated and optionally substituted cycloalkyl or heterocyclyl, or represents aryl, arylalkyl or hetaryl, each of which is optionally substituted by halogen, alkyl, halogenoalkyl, alkoxy, halogenoalkoxy, cyano or nitro,

B represents hydrogen, alkyl or alkoxyalkyl, or

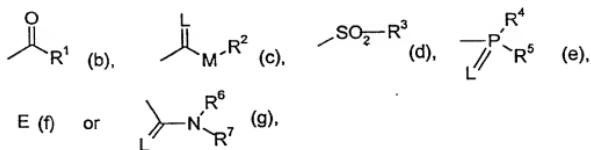
10 A and B together with the carbon atom to which they are bonded represent a saturated or unsaturated, optionally substituted carbocycle or heterocycle,

D represents hydrogen or an optionally substituted radical from the series consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, polyalkoxyalkyl, alkylthioalkyl, saturated or unsaturated cycloalkyl, saturated or unsaturated heterocyclyl, arylalkyl, aryl, hetarylalkyl or hetaryl, or

15

A and D together with the atoms to which they are bonded represent a saturated or unsaturated and optionally substituted carbocycle or heterocycle,

5 G, in the event that Het represents one of the radicals (1), (2), (3), (5) or (6), represents hydrogen (a) or, in the event that Het represents one of the radicals (1), (2), (3), (4), (5) or (6), represents one of the groups



in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulphur,

10 M represents oxygen or sulphur,

15 R<sup>1</sup> represents alkyl, alkenyl, alkoxyalkyl, alkylthioalkyl or polyalkoxyalkyl, each of which is optionally substituted by halogen, or represents cycloalkyl or heterocyclyl, each of which is optionally substituted by halogen, alkyl or alkoxy, or represents in each case optionally substituted phenyl, phenylalkyl, hetaryl, phenoxyalkyl or hetaryloxyalkyl,

R<sup>2</sup> represents alkyl, alkenyl, alkoxyalkyl or polyalkoxyalkyl, each of which is optionally substituted by halogen, or represents in each case optionally substituted cycloalkyl, phenyl or benzyl,

20 R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> independently of one another represent alkyl, alkoxy, alkylamino,

dialkylamino, alkylthio, alkenylthio or cycloalkylthio, each of which is optionally substituted by halogen, or in each case represent optionally substituted phenyl, benzyl, phenoxy or phenylthio,

5 R<sup>6</sup> and R<sup>7</sup> independently of one another represent hydrogen, or represent alkyl, cycloalkyl, alkenyl, alkoxy or alkoxyalkyl, each of which is optionally substituted by halogen, or represent in each case optionally substituted phenyl or benzyl, or together with the N atom to which they are bonded represent an optionally substituted cycle which optionally contains oxygen or sulphur.

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10 2. Compounds of the formula (I) according to Claim 1 in which

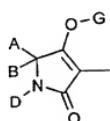
X represents halogen,

Y represents halogen or C<sub>1</sub>-C<sub>6</sub>-alkyl,

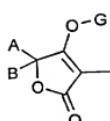
Z represents halogen or C<sub>1</sub>-C<sub>6</sub>-alkyl,

15 where always one of the substituents Y and Z represents halogen, while the other represents alkyl,

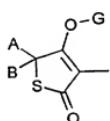
Het represents one of the groups



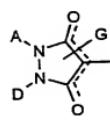
(1),



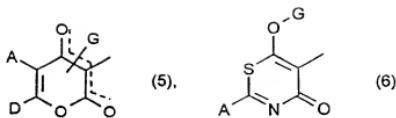
(2),



(3),



(4),



5 A represents hydrogen, or represents  $C_1$ - $C_{12}$ -alkyl,  $C_2$ - $C_8$ -alkenyl,  $C_1$ - $C_{10}$ -alkoxy- $C_1$ - $C_8$ -alkyl, poly- $C_1$ - $C_8$ -alkoxy- $C_1$ - $C_8$ -alkyl or  $C_1$ - $C_{10}$ -alkylthio- $C_1$ - $C_6$ -alkyl, each of which is optionally substituted by halogen, or represents  $C_3$ - $C_8$ -cycloalkyl which is optionally substituted by halogen,  $C_1$ - $C_6$ -alkyl or  $C_1$ - $C_6$ -alkoxy and in which one or two methylene groups which are not directly adjacent are optionally replaced by oxygen and/or sulphur, or represents phenyl, naphthyl, phenyl- $C_1$ - $C_6$ -alkyl, naphthyl- $C_1$ - $C_6$ -alkyl or hetaryl having 5 or 6 ring atoms and one to three hetero atoms from the series consisting of oxygen, sulphur and nitrogen, in each case optionally substituted by halogen,  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -halogenoalkyl,  $C_1$ - $C_6$ -alkoxy,  $C_1$ - $C_6$ -halogenoalkoxy, cyano or nitro,

10 B represents hydrogen,  $C_1$ - $C_{12}$ -alkyl or  $C_1$ - $C_8$ -alkoxy- $C_1$ - $C_6$ -alkyl, or

15 A, B and the carbon atom to which they are bonded represent  $C_3$ - $C_{10}$ -cycloalkyl or  $C_5$ - $C_{10}$ -cycloalkenyl in each of which a methylene group is optionally replaced by oxygen or sulphur and which are optionally substituted by  $C_1$ - $C_8$ -alkyl,  $C_3$ - $C_{10}$ -cycloalkyl,  $C_1$ - $C_8$ -halogenoalkyl,  $C_1$ - $C_8$ -alkoxy,  $C_1$ - $C_8$ -alkylthio, halogen or phenyl, or

20 A, B and the carbon atom to which they are bonded represent  $C_5$ - $C_6$ -cycloalkyl which is substituted by an alkylenediyl group which optionally contains one or two oxygen and/or sulphur atoms or by an alkylenedioxy or by an alkylenedithiyl group, this group, together with the carbon atom to which it is bonded forming a further five to eight-membered ring, or

25 A, B and the carbon atom to which they are bonded represent  $C_3$ - $C_8$ -

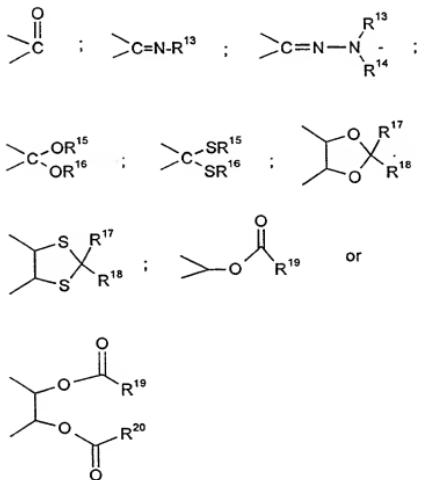
cycloalkyl or  $C_5$ - $C_8$ -cycloalkenyl in which two substituents together with the carbon atoms to which they are bonded represent  $C_3$ - $C_6$ -alkanediyl,  $C_3$ - $C_6$ -alkenediyl or  $C_4$ - $C_6$ -alkanedienediyl, each of which is optionally substituted by  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -alkoxy or halogen and in which in each case one methylene group is optionally replaced by oxygen or sulphur.

D represents hydrogen, or represents  $C_1$ - $C_{12}$ -alkyl,  $C_3$ - $C_8$ -alkenyl,  $C_3$ - $C_8$ -alkinyl,  $C_1$ - $C_{10}$ -alkoxy- $C_2$ - $C_8$ -alkyl, poly- $C_1$ - $C_8$ -alkoxy- $C_2$ - $C_8$ -alkyl or  $C_1$ - $C_{10}$ -alkylthio- $C_2$ - $C_8$ -alkyl, each of which is optionally substituted by halogen, or represents  $C_3$ - $C_8$ -cycloalkyl which is optionally substituted by halogen,  $C_1$ - $C_4$ -alkyl,  $C_1$ - $C_4$ -alkoxy or  $C_1$ - $C_4$ -halogenoalkyl and in which one or two methylene groups which are not directly adjacent are optionally replaced by oxygen and/or sulphur, or represents phenyl, hetaryl having 5 to 6 ring atoms and one or two hetero atoms from the series consisting of oxygen, sulphur and nitrogen, phenyl- $C_1$ - $C_6$ -alkyl or hetaryl- $C_1$ - $C_6$ -alkyl having 5 to 6 ring atoms and one or two hetero atoms from the series consisting of oxygen, sulphur and nitrogen, in each case optionally substituted by halogen,  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -halogenoalkyl,  $C_1$ - $C_6$ -alkoxy,  $C_1$ - $C_6$ -halogenoalkoxy, cyano or nitro, or

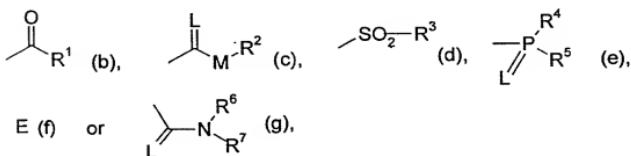
A and D together represent a  $C_3$ - $C_6$ -alkanediyl,  $C_3$ - $C_6$ -alkenediyl or  $C_4$ - $C_6$ -alkanedienediyl group in each of which one methylene group is optionally replaced by oxygen or sulphur and which is in each case optionally substituted by halogen, hydroxyl, mercapto, or by  $C_1$ - $C_{10}$ -alkyl,  $C_1$ - $C_6$ -alkoxy,  $C_1$ - $C_6$ -alkylthio,  $C_3$ - $C_7$ -cycloalkyl, phenyl or benzyloxy, each of which is optionally substituted by halogen, or by a further  $C_3$ - $C_6$ -alkanediyl,  $C_3$ - $C_6$ -alkenediyl or  $C_4$ - $C_6$ -alkanedienediyl group which forms a fused ring and in each of which one methylene group is optionally replaced by oxygen or sulphur and which is optionally substituted by  $C_1$ - $C_6$ -alkyl or in which two adjacent substituents together with the carbon atoms to which they are bonded optionally form a further saturated or unsaturated carbocycle having 5 or

6 ring atoms, or

A and D together represent a C<sub>3</sub>-C<sub>6</sub>-alkanediyl or C<sub>3</sub>-C<sub>6</sub>-alkenediyl group in each of which one of the following groups



G in the event that Het represents one of the radicals (1), (2), (3), (5) or (6), represents hydrogen (a) or, in the event that Het represents one of the radicals (1), (2), (3), (4), (5) or (6), represents one of the groups



in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulphur and

M represents oxygen or sulphur,

5 R<sup>1</sup> represents C<sub>1</sub>-C<sub>20</sub>-alkyl, C<sub>2</sub>-C<sub>20</sub>-alkenyl, C<sub>1</sub>-C<sub>8</sub>-alkoxy-C<sub>1</sub>-C<sub>8</sub>-alkyl, C<sub>1</sub>-C<sub>8</sub>-alkylthio-C<sub>1</sub>-C<sub>8</sub>-alkyl or poly-C<sub>1</sub>-C<sub>8</sub>-alkoxy-C<sub>1</sub>-C<sub>8</sub>-alkyl, each of which is optionally substituted by halogen, or represents C<sub>3</sub>-C<sub>8</sub>-cycloalkyl which is optionally substituted by halogen, C<sub>1</sub>-C<sub>6</sub>-alkyl or C<sub>1</sub>-C<sub>6</sub>-alkoxy and in which one or two methylene groups which are not directly adjacent are optionally replaced by oxygen and/or sulphur,

10 or represents phenyl which is optionally substituted by halogen, cyano, nitro, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>1</sub>-C<sub>6</sub>-halogenoalkyl, C<sub>1</sub>-C<sub>6</sub>-halogenoalkoxy, C<sub>1</sub>-C<sub>6</sub>-alkylthio or C<sub>1</sub>-C<sub>6</sub>-alkylsulphonyl,

15 or represents phenyl-C<sub>1</sub>-C<sub>6</sub>-alkyl which is optionally substituted by halogen, nitro, cyano, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>1</sub>-C<sub>6</sub>-halogenoalkyl or C<sub>1</sub>-C<sub>6</sub>-halogenoalkoxy,

or represents 5- or 6-membered hetaryl having one or two hetero atoms from the series consisting of oxygen, sulphur and nitrogen which is optionally substituted by halogen or C<sub>1</sub>-C<sub>6</sub>-alkyl,

20 or represents phenoxy-C<sub>1</sub>-C<sub>6</sub>-alkyl which is optionally substituted by halogen or C<sub>1</sub>-C<sub>6</sub>-alkyl,

or represents 5- or 6-membered hetaryloxy-C<sub>1</sub>-C<sub>6</sub>-alkyl having one or two hetero atoms from the series consisting of oxygen, sulphur and nitrogen which is optionally substituted by halogen, amino or C<sub>1</sub>-C<sub>6</sub>-

alkyl,

$R^2$  represents  $C_1$ - $C_{20}$ -alkyl,  $C_2$ - $C_{20}$ -alkenyl,  $C_1$ - $C_8$ -alkoxy- $C_2$ - $C_8$ -alkyl or poly- $C_1$ - $C_8$ -alkoxy- $C_2$ - $C_8$ -alkyl, each of which is optionally substituted by halogen,

5 or represents  $C_3\text{-}C_8$ -cycloalkyl which is optionally substituted by halogen,  $C_1\text{-}C_6$ -alkyl or  $C_1\text{-}C_6$ -alkoxy, or

represents phenyl or benzyl, each of which is optionally substituted by halogen, cyano, nitro,  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -alkoxy,  $C_1$ - $C_6$ -halogenoalkyl or  $C_1$ - $C_6$ -halogenoalkoxy,

<sup>R<sup>3</sup></sup> represents C<sub>1</sub>-C<sub>8</sub>-alkyl which is optionally substituted by halogen, or represents phenyl or benzyl, each of which is optionally substituted by halogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-halogenoalkyl, C<sub>1</sub>-C<sub>4</sub>-halogenoalkoxy, cyano or nitro,

15  $R^4$  and  $R^5$  independently of one another represent  $C_1$ - $C_8$ -alkyl,  $C_1$ - $C_8$ -alkoxy,  $C_1$ -  
 $C_8$ -alkylamino, di-( $C_1$ - $C_8$ -alkyl)amino,  $C_1$ - $C_8$ -alkylthio or  $C_2$ - $C_8$ -  
alkenylthio, each of which is optionally substituted by halogen, or  
represent phenyl, phenoxy or phenylthio, each of which is optionally  
substituted by halogen, nitro, cyano,  $C_1$ - $C_4$ -alkoxy,  $C_1$ - $C_4$ -  
halogenoalkoxy,  $C_1$ - $C_4$ -alkylthio,  $C_1$ - $C_4$ -halogenoalkylthio,  $C_1$ - $C_4$ -alkyl or  
20  $C_1$ - $C_4$ -halogenoalkyl,

<sup>25</sup> R<sup>6</sup> and R<sup>7</sup> independently of one another represent hydrogen, or represent C<sub>1</sub>-C<sub>8</sub>-alkyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, C<sub>1</sub>-C<sub>8</sub>-alkoxy, C<sub>3</sub>-C<sub>8</sub>-alkenyl or C<sub>1</sub>-C<sub>8</sub>-alkoxy-C<sub>2</sub>-C<sub>8</sub>-alkyl, each of which is optionally substituted by halogen, or represent phenyl or benzyl, each of which is optionally substituted by halogen, C<sub>1</sub>-C<sub>8</sub>-alkyl, C<sub>1</sub>-C<sub>8</sub>-halogenoalkyl or C<sub>1</sub>-C<sub>8</sub>-alkoxy, or together represent a C<sub>3</sub>-C<sub>6</sub>-alkylene radical which is optionally substituted by C<sub>1</sub>-C<sub>6</sub>-alkyl and in which one methylene group is optionally replaced by oxygen or

sulphur,

5            R<sup>13</sup> represents hydrogen, or represents C<sub>1</sub>-C<sub>8</sub>-alkyl or C<sub>1</sub>-C<sub>8</sub>-alkoxy, each of which is optionally substituted by halogen, or represents C<sub>3</sub>-C<sub>8</sub>-cycloalkyl which is optionally substituted by halogen, C<sub>1</sub>-C<sub>4</sub>-alkyl or C<sub>1</sub>-C<sub>4</sub>-alkoxy and in which one methylene group is optionally replaced by oxygen or sulphur, or represents phenyl, phenyl-C<sub>1</sub>-C<sub>4</sub>-alkyl or phenyl-C<sub>1</sub>-C<sub>4</sub>-alkoxy, each of which is optionally substituted by halogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-halogenoalkyl, C<sub>1</sub>-C<sub>4</sub>-halogenoalkoxy, nitro or cyano,

10            R<sup>14</sup> represents hydrogen or C<sub>1</sub>-C<sub>8</sub>-alkyl or

R<sup>13</sup> and R<sup>14</sup> together represent C<sub>4</sub>-C<sub>6</sub>-alkanediyl,

15            R<sup>15</sup> and R<sup>16</sup> are identical or different and represent C<sub>1</sub>-C<sub>6</sub>-alkyl or

R<sup>15</sup> and R<sup>16</sup> together represent a C<sub>2</sub>-C<sub>4</sub>-alkanediyl radical which is optionally substituted by C<sub>1</sub>-C<sub>6</sub>-alkyl or by phenyl which is optionally substituted by halogen, C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-halogenoalkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-halogenoalkoxy, nitro or cyano,

20            R<sup>17</sup> and R<sup>18</sup> independently of one another represent hydrogen, or represent C<sub>1</sub>-C<sub>8</sub>-alkyl which is optionally substituted by halogen, or represent phenyl which is optionally substituted by halogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-halogenoalkyl, C<sub>1</sub>-C<sub>4</sub>-halogenoalkoxy, nitro or cyano, or

25            R<sup>17</sup> and R<sup>18</sup> together with the carbon atom to which they are bonded represent C<sub>5</sub>-C<sub>7</sub>-cycloalkyl which is optionally substituted by C<sub>1</sub>-C<sub>4</sub>-alkyl or C<sub>1</sub>-C<sub>4</sub>-alkoxy and in which one methylene group is optionally replaced by oxygen or sulphur and

25            R<sup>19</sup> and R<sup>20</sup> independently of one another represent C<sub>1</sub>-C<sub>10</sub>-alkyl, C<sub>2</sub>-C<sub>10</sub>-alkenyl,

C<sub>1</sub>-C<sub>10</sub>-alkoxy, C<sub>1</sub>-C<sub>10</sub>-alkylamino, C<sub>3</sub>-C<sub>10</sub>-alkenylamino, di-(C<sub>1</sub>-C<sub>10</sub>-alkyl)amino or di-(C<sub>3</sub>-C<sub>10</sub>-alkenyl)amino.

3. Compounds of the formula (I) according to Claim 1 in which

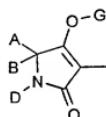
X represents fluorine, chlorine or bromine,

5 Y represents fluorine, chlorine, bromine or C<sub>1</sub>-C<sub>4</sub>-alkyl,

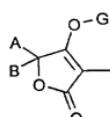
Z represents fluorine, chlorine, bromine or C<sub>1</sub>-C<sub>4</sub>-alkyl,

where always one of the radicals Y and Z represents halogen while the other represents alkyl,

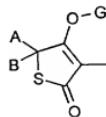
Het represents one of the groups



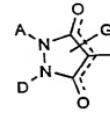
(1).



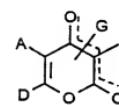
(2).



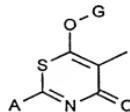
(3).



(4).



(5).



(6).

A represents hydrogen, or represents C<sub>1</sub>-C<sub>10</sub>-alkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>1</sub>-C<sub>8</sub>-alkoxy-C<sub>1</sub>-C<sub>6</sub>-alkyl, poly-C<sub>1</sub>-C<sub>6</sub>-alkoxy-C<sub>1</sub>-C<sub>6</sub>-alkyl or C<sub>1</sub>-C<sub>8</sub>-alkylthio-C<sub>1</sub>-C<sub>6</sub>-alkyl, each of which is optionally substituted by fluorine or chlorine,

15

or represents  $C_3$ - $C_7$ -cycloalkyl which is optionally substituted by fluorine, chlorine,  $C_1$ - $C_4$ -alkyl or  $C_1$ - $C_4$ -alkoxy and in which one or two methylene groups which are not directly adjacent are optionally replaced by oxygen and/or sulphur, or represents phenyl, furanyl, pyridyl, imidazolyl, triazolyl, pyrazolyl, indolyl, thiazolyl, thienyl or phenyl- $C_1$ - $C_4$ -alkyl, each of which is optionally substituted by fluorine, chlorine, bromine,  $C_1$ - $C_4$ -alkyl,  $C_1$ - $C_4$ -halogenoalkyl,  $C_1$ - $C_4$ -alkoxy,  $C_1$ - $C_4$ -halogenoalkoxy, cyano or nitro,

5 B represents hydrogen,  $C_1$ - $C_{10}$ -alkyl or  $C_1$ - $C_6$ -alkoxy- $C_1$ - $C_4$ -alkyl, or

10 A, B and the carbon atom to which they are bonded represent  $C_3$ - $C_8$ -cycloalkyl or  $C_5$ - $C_8$ -cycloalkenyl in each of which one methylene group is optionally replaced by oxygen or sulphur and which are optionally substituted by  $C_1$ - $C_6$ -alkyl,  $C_3$ - $C_8$ -cycloalkyl,  $C_1$ - $C_3$ -halogenoalkyl,  $C_1$ - $C_6$ -alkoxy,  $C_1$ - $C_6$ -alkylthio, fluorine, chlorine or phenyl, or

15 A, B and the carbon atom to which they are bonded represent  $C_3$ - $C_6$ -cycloalkyl which is substituted by an alkylenediyl group which optionally contains one or two oxygen or sulphur atoms or by an alkylenedioxy or by an alkylenedithioly group, this group, together with the carbon atom to which it is bonded forming a further five to seven-membered ring, or

20 A, B and the carbon atom to which they are bonded represent  $C_3$ - $C_6$ -cycloalkyl or  $C_5$ - $C_6$ -cycloalkenyl in which two substituents together with the carbon atoms to which they are bonded represent  $C_3$ - $C_5$ -alkanediyl,  $C_3$ - $C_5$ -alkenediyl or butadienediyl, each of which is optionally substituted by  $C_1$ - $C_5$ -alkyl,  $C_1$ - $C_5$ -alkoxy, fluorine, chlorine or bromine and in which in each case one methylene group is optionally replaced by oxygen or sulphur,

25 D represents hydrogen, or represents  $C_1$ - $C_{10}$ -alkyl,  $C_3$ - $C_6$ -alkenyl,  $C_3$ - $C_6$ -

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10  
15

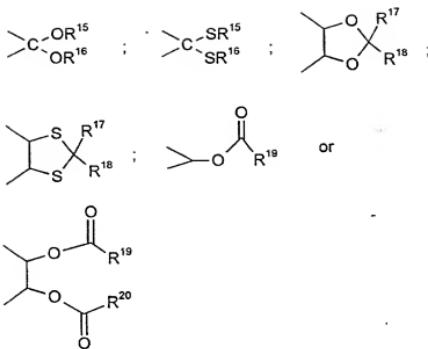
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alkinyl, C<sub>1</sub>-C<sub>8</sub>-alkoxy-C<sub>2</sub>-C<sub>6</sub>-alkyl, poly-C<sub>1</sub>-C<sub>6</sub>-alkoxy-C<sub>2</sub>-C<sub>6</sub>-alkyl or C<sub>1</sub>-C<sub>8</sub>-alkylthio-C<sub>2</sub>-C<sub>6</sub>-alkyl, each of which is optionally substituted by fluorine or chlorine, or represents C<sub>3</sub>-C<sub>7</sub>-cycloalkyl which is optionally substituted by fluorine, chlorine, C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy or C<sub>1</sub>-C<sub>2</sub>-halogenoalkyl and in which one or two methylene groups which are not directly adjacent are optionally replaced by oxygen and/or sulphur, or represents phenyl, furanyl, imidazolyl, pyridyl, thiazolyl, pyrazolyl, pyrimidyl, pyrrolyl, thienyl, triazolyl or phenyl-C<sub>1</sub>-C<sub>4</sub>-alkyl, each of which is optionally substituted by fluorine, chlorine, bromine, C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-halogenoalkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-halogenoalkoxy, cyano or nitro, or

A and D together represent a C<sub>3</sub>-C<sub>5</sub>-alkanediyl or C<sub>3</sub>-C<sub>5</sub>-alkenediyl group in each of which one methylene group is optionally replaced by oxygen or sulphur and which are optionally substituted by fluorine, chlorine, hydroxyl, mercapto, or by C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-alkylthio, C<sub>3</sub>-C<sub>6</sub>-cycloalkyl, phenyl or benzyloxy, each of which is optionally substituted by fluorine or chlorine, or

in which in each case one of the following groups

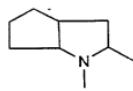




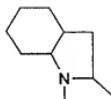
is optionally present;

or A and D (in the case of the compounds of the formula (I-1)) together with the atoms to which they are bonded represent one of the groups AD-1 to AD-27

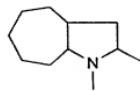
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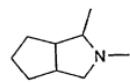
AD-1



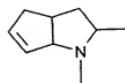
AD-2



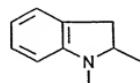
AD-3



AD-4

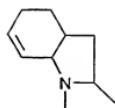


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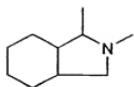


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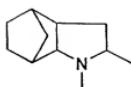
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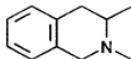
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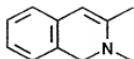
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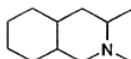
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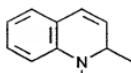
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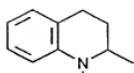
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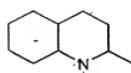
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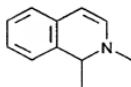
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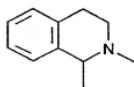
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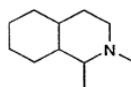
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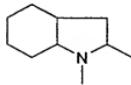
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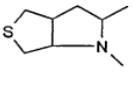
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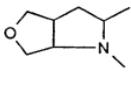
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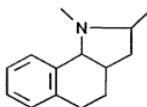
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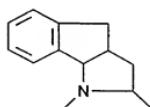
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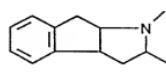
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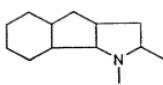
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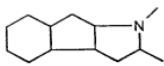
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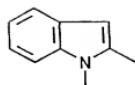
AD-24



AD-25



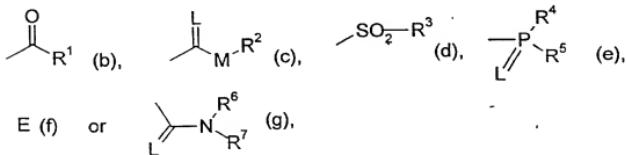
AD-26



AD-27

G in the event that Het represents one of the radicals (1), (2), (3), (5) or (6), represents hydrogen (a) or, in the event that Het represents one of the radicals (1), (2), (3), (4), (5) or (6), represents one of the groups

5



in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulphur and

10

M represents oxygen or sulphur,

15

$R^1$  represents  $C_1-C_{16}$ -alkyl,  $C_2-C_{16}$ -alkenyl,  $C_1-C_6$ -alkoxy- $C_1-C_6$ -alkyl,  $C_1-C_6$ -alkylthio- $C_1-C_6$ -alkyl or poly- $C_1-C_6$ -alkoxy- $C_1-C_6$ -alkyl, each of which is optionally substituted by fluorine or chlorine, or represents  $C_3-C_7$ -cycloalkyl which is optionally substituted by fluorine, chlorine,  $C_1-C_5$ -alkyl or  $C_1-C_5$ -alkoxy and in which one or two methylene groups which are not directly adjacent are optionally replaced by oxygen and/or sulphur,

or represents phenyl which is optionally substituted by fluorine, chlorine, bromine, cyano, nitro,  $C_1-C_4$ -alkyl,  $C_1-C_4$ -alkoxy,  $C_1-C_3$ -halogenoalkyl,

C<sub>1</sub>-C<sub>3</sub>-halogenoalkoxy, C<sub>1</sub>-C<sub>4</sub>-alkylthio or C<sub>1</sub>-C<sub>4</sub>-alkylsulphonyl,

or represents phenyl-C<sub>1</sub>-C<sub>4</sub>-alkyl which is optionally substituted by fluorine, chlorine, bromine, C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>3</sub>-halogenoalkyl or C<sub>1</sub>-C<sub>3</sub>-halogenoalkoxy,

5 or represents pyrazolyl, thiazolyl, pyridyl, pyrimidyl, furanyl or thieryl, each of which is optionally substituted by fluorine, chlorine, bromine or C<sub>1</sub>-C<sub>4</sub>-alkyl,

or represents phenoxy-C<sub>1</sub>-C<sub>5</sub>-alkyl which is optionally substituted by fluorine, chlorine, bromine or C<sub>1</sub>-C<sub>4</sub>-alkyl, or

10 represents pyridyloxy-C<sub>1</sub>-C<sub>5</sub>-alkyl, pyrimidyloxy-C<sub>1</sub>-C<sub>5</sub>-alkyl or thiazolyloxy-C<sub>1</sub>-C<sub>5</sub>-alkyl, each of which is optionally substituted by fluorine, chlorine, bromine, amino or C<sub>1</sub>-C<sub>4</sub>-alkyl,

15 R<sup>2</sup> represents C<sub>1</sub>-C<sub>16</sub>-alkyl, C<sub>2</sub>-C<sub>16</sub>-alkenyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy-C<sub>2</sub>-C<sub>6</sub>-alkyl or poly-C<sub>1</sub>-C<sub>6</sub>-alkoxy-C<sub>2</sub>-C<sub>6</sub>-alkyl, each of which is optionally substituted by fluorine or chlorine,

or represents C<sub>3</sub>-C<sub>7</sub>-cycloalkyl which is optionally substituted by fluorine, chlorine, C<sub>1</sub>-C<sub>4</sub>-alkyl or C<sub>1</sub>-C<sub>4</sub>-alkoxy, or

20 represents phenyl or benzyl, each of which is optionally substituted by fluorine, chlorine, bromine, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>3</sub>-alkoxy, C<sub>1</sub>-C<sub>3</sub>-halogenoalkyl or C<sub>1</sub>-C<sub>3</sub>-halogenoalkoxy,

R<sup>3</sup> represents C<sub>1</sub>-C<sub>6</sub>-alkyl which is optionally substituted by fluorine or chlorine, or represents phenyl or benzyl, each of which is optionally substituted by fluorine, chlorine, bromine, C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>1</sub>-C<sub>5</sub>-alkoxy, C<sub>1</sub>-C<sub>3</sub>-halogenoalkyl, C<sub>1</sub>-C<sub>3</sub>-halogenoalkoxy, cyano or nitro,

5                    R<sup>4</sup> and R<sup>5</sup> independently of one another represent C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>1</sub>-C<sub>6</sub>-alkylamino, di-(C<sub>1</sub>-C<sub>6</sub>-alkyl)amino, C<sub>1</sub>-C<sub>6</sub>-alkylthio or C<sub>3</sub>-C<sub>4</sub>-alkenylthio, each of which is optionally substituted by fluorine or chlorine, or represent phenyl, phenoxy or phenylthio, each of which is optionally substituted by fluorine, chlorine, bromine, nitro, cyano, C<sub>1</sub>-C<sub>3</sub>-alkoxy, C<sub>1</sub>-C<sub>3</sub>-halogenoalkoxy, C<sub>1</sub>-C<sub>3</sub>-alkylthio, C<sub>1</sub>-C<sub>3</sub>-halogenoalkylthio, C<sub>1</sub>-C<sub>3</sub>-alkyl or C<sub>1</sub>-C<sub>3</sub>-halogenoalkyl,

10                  R<sup>6</sup> and R<sup>7</sup> independently of one another represent hydrogen, or represent C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>6</sub>-cycloalkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>3</sub>-C<sub>6</sub>-alkenyl or C<sub>1</sub>-C<sub>6</sub>-alkoxy-C<sub>2</sub>-C<sub>6</sub>-alkyl, each of which is optionally substituted by fluorine or chlorine, or represent phenyl or benzyl, each of which is optionally substituted by fluorine, chlorine, bromine, C<sub>1</sub>-C<sub>5</sub>-halogenoalkyl, C<sub>1</sub>-C<sub>5</sub>-alkyl or C<sub>1</sub>-C<sub>5</sub>-alkoxy, or together represent a C<sub>3</sub>-C<sub>6</sub>-alkylene radical which is optionally substituted by C<sub>1</sub>-C<sub>4</sub>-alkyl and in which one methylene group is optionally replaced by oxygen or sulphur,

15                  R<sup>13</sup> represents hydrogen, or represents C<sub>1</sub>-C<sub>6</sub>-alkyl or C<sub>1</sub>-C<sub>6</sub>-alkoxy, each of which is optionally substituted by fluorine or chlorine, or represents C<sub>3</sub>-C<sub>7</sub>-cycloalkyl which is optionally substituted by fluorine, C<sub>1</sub>-C<sub>2</sub>-alkyl or C<sub>1</sub>-C<sub>2</sub>-alkoxy and in which one methylene group is optionally replaced by oxygen or sulphur, or represents phenyl, phenyl-C<sub>1</sub>-C<sub>3</sub>-alkyl or phenyl-C<sub>1</sub>-C<sub>2</sub>-alkoxy, each of which is optionally substituted by fluorine, chlorine, bromine, C<sub>1</sub>-C<sub>5</sub>-alkyl, C<sub>1</sub>-C<sub>5</sub>-alkoxy, C<sub>1</sub>-C<sub>2</sub>-halogenoalkyl, C<sub>1</sub>-C<sub>2</sub>-halogenoalkoxy, nitro or cyano,

20                  R<sup>14</sup> represents hydrogen or C<sub>1</sub>-C<sub>6</sub>-alkyl or

25                  R<sup>13</sup> and R<sup>14</sup> together represent C<sub>4</sub>-C<sub>6</sub>-alkanediyl,

R<sup>15</sup> and R<sup>16</sup> are identical or different and represent C<sub>1</sub>-C<sub>4</sub>-alkyl or

R<sup>15</sup> and R<sup>16</sup> together represent a C<sub>2</sub>-C<sub>3</sub>-alkanediyl radical which is optionally

5

substituted by  $C_1$ - $C_4$ -alkyl or by phenyl which is optionally substituted by fluorine, chlorine, bromine,  $C_1$ - $C_2$ -alkyl,  $C_1$ - $C_2$ -halogenoalkyl,  $C_1$ - $C_2$ -alkoxy,  $C_1$ - $C_2$ -halogenoalkoxy, nitro or cyano,

$R^{17}$  and  $R^{18}$  independently of one another represent hydrogen, or represent  $C_1$ -  
5  $C_8$ -alkyl which is optionally substituted by fluorine or chlorine, or  
represent phenyl which is optionally substituted by fluorine, chlorine,  
 $C_1$ - $C_4$ -alkyl,  $C_1$ - $C_4$ -alkoxy,  $C_1$ - $C_2$ -halogenoalkyl,  $C_1$ - $C_2$ -halogenoalkoxy,  
nitro or cyano, or

10

$R^{17}$  and  $R^{18}$  together with the carbon atom to which they are bonded represent  
 $C_5$ - $C_6$ -cycloalkyl which is optionally substituted by  $C_1$ - $C_3$ -alkyl or  $C_1$ - $C_3$ -  
alkoxy and in which one methylene group is optionally replaced by  
oxygen or sulphur, and

15

$R^{19}$  and  $R^{20}$  independently of one another represent  $C_1$ - $C_6$ -alkyl,  $C_2$ - $C_6$ -alkenyl,  
 $C_1$ - $C_6$ -alkoxy,  $C_1$ - $C_6$ -alkylamino,  $C_3$ - $C_6$ -alkenylamino, di-( $C_1$ - $C_6$ -  
alkyl)amino or di-( $C_3$ - $C_6$ -alkenyl)amino.

4. Compounds of the formula (I) according to Claim 1, in which

X represents fluorine, chlorine or bromine,

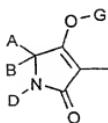
Y represents fluorine, chlorine, bromine, methyl, ethyl, n-propyl or iso-  
propyl, .

20

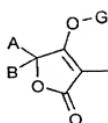
Z represents fluorine, chlorine, bromine, methyl, ethyl, n-propyl or iso-  
propyl,

where always one of the radicals Y and Z represents halogen while the other  
represents alkyl,

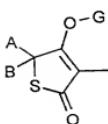
Het represents one of the groups



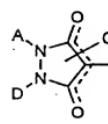
(1),



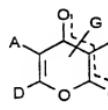
(2),



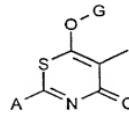
(3),



(4),



(5),



(6),

5 A represents hydrogen, or represents C<sub>1</sub>-C<sub>8</sub>-alkyl, C<sub>2</sub>-C<sub>4</sub>-alkenyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy-C<sub>1</sub>-C<sub>4</sub>-alkyl, poly-C<sub>1</sub>-C<sub>4</sub>-alkoxy-C<sub>1</sub>-C<sub>4</sub>-alkyl or C<sub>1</sub>-C<sub>6</sub>-alkylthio-C<sub>1</sub>-C<sub>4</sub>-alkyl, each of which is optionally substituted by fluorine or chlorine, or represents C<sub>3</sub>-C<sub>6</sub>-cycloalkyl which is optionally substituted by fluorine, chlorine, methyl or methoxy and in which one or two methylene groups which are not directly adjacent are optionally replaced by oxygen and/or sulphur, or represents phenyl, pyridyl or benzyl, each of which is optionally substituted by fluorine, chlorine, bromine, methyl, ethyl, n-propyl, iso-propyl, methoxy, ethoxy, trifluoromethyl, trifluoromethoxy, cyano or nitro,

10

B represents hydrogen, C<sub>1</sub>-C<sub>8</sub>-alkyl or C<sub>1</sub>-C<sub>4</sub>-alkoxy-C<sub>1</sub>-C<sub>2</sub>-alkyl, or

15

A, B and the carbon atom to which they are bonded represent C<sub>3</sub>-C<sub>8</sub>-cycloalkyl or C<sub>5</sub>-C<sub>8</sub>-cycloalkenyl in each of which one methylene group is optionally replaced by oxygen or sulphur and which are optionally

substituted by methyl, ethyl, n-propyl, iso-propyl, butyl, iso-butyl, sec-butyl, tert-butyl, cyclohexyl, trifluoromethyl, methoxy, ethoxy, n-propoxy, iso-propoxy, butoxy, iso-butoxy, sec-butoxy, tert-butoxy, methylthio, ethylthio, fluorine, chlorine or phenyl, or

5 A, B and the carbon atom to which they are bonded represent  $C_5$ - $C_6$ -cycloalkyl which is substituted by an alkylatediyl group which optionally contains an oxygen or sulphur atom or by an alkylatedioxy group, this alkylatediyl or alkylatedioxy group together with the carbon atom to which it is bonded forming a further five to six-membered ring, or

A, B and the carbon atom to which they are bonded represent  $C_3$ - $C_6$ -cycloalkyl or  $C_5$ - $C_6$ -cycloalkenyl in which two substituents together with the carbon atoms to which they are bonded represent  $C_3$ - $C_4$ -alkanediyl,  $C_3$ - $C_4$ -alkenediyl or butadienediyl, in each of which one methylene group is optionally replaced by oxygen or sulphur,

20 D represents hydrogen, or represents  $C_1$ - $C_8$ -alkyl,  $C_3$ - $C_4$ -alkenyl,  $C_3$ - $C_4$ -alkinyl,  $C_1$ - $C_6$ -alkoxy- $C_2$ - $C_4$ -alkyl, poly- $C_1$ - $C_4$ -alkoxy- $C_2$ - $C_4$ -alkyl,  $C_1$ - $C_4$ -alkylthio- $C_2$ - $C_4$ -alkyl or  $C_3$ - $C_6$ -cycloalkyl, in which one or two methylene groups which are not directly adjacent are replaced by oxygen and/or sulphur, in each case optionally substituted by fluorine or chlorine, or represents phenyl, furanyl, pyridyl, thieryl or benzyl, each of which is optionally substituted by fluorine, chlorine, bromine, methyl, ethyl, n-propyl, iso-propyl, methoxy, ethoxy, trifluoromethyl, trifluoromethoxy, cyano or nitro,

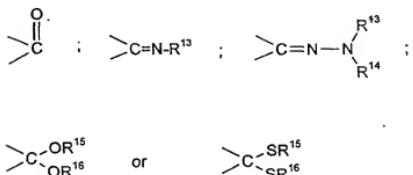
25

or

A and D together represent a  $C_3$ - $C_5$ -alkanediyl or  $C_3$ - $C_5$ -alkenediyl group in each of which one methylene group is optionally replaced by oxygen or sulphur and which are optionally substituted by fluorine, chlorine,

hydroxyl, mercapto, or by C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-alkylthio, C<sub>3</sub>-C<sub>6</sub>-cycloalkyl, phenyl or benzyloxy, each of which is optionally substituted by fluorine or chlorine, or

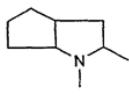
in which in each case one of the following groups



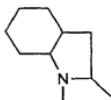
is optionally present,

or A and D, in the case of the compounds of the formula (I-1), together with the atoms to which they are bonded represent one of the following groups:

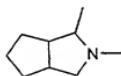
10



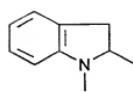
AD-1



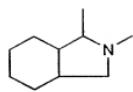
AD-2



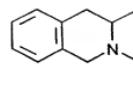
AD-4



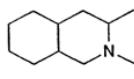
AD-6



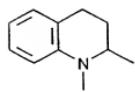
AD-8



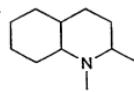
AD-10



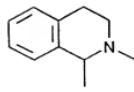
AD-12



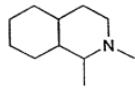
AD-14



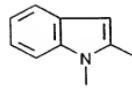
AD-15



AD-17

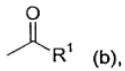


AD-18

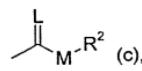


AD-27

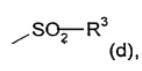
G in the event that Het represents one of the radicals (1), (2), (3), (5) or (6), represents hydrogen (a) or, in the event that Het represents one of the radicals (1), (2), (3), (4), (5) or (6), represents one of the groups



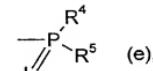
(b),



(c),



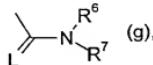
(d),



(e),



(f) or



(g),

in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulphur and

M represents oxygen or sulphur.

R<sup>1</sup> represents C<sub>1</sub>-C<sub>14</sub>-alkyl, C<sub>2</sub>-C<sub>14</sub>-alkenyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy-C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkylthio-C<sub>1</sub>-C<sub>6</sub>-alkyl or poly-C<sub>1</sub>-C<sub>4</sub>-alkoxy-C<sub>1</sub>-C<sub>4</sub>-alkyl, each of which is optionally substituted by fluorine or chlorine, or represents C<sub>3</sub>-C<sub>6</sub>-cycloalkyl which is optionally substituted by fluorine, chlorine, methyl, ethyl, n-propyl, i-propyl, n-butyl, i-butyl, tert-butyl, methoxy, ethoxy, n-propoxy or iso-propoxy and in which one or two methylene groups which are not directly adjacent are optionally replaced by oxygen and/or sulphur.

or represents phenyl which is optionally substituted by fluorine, chlorine, bromine, cyano, nitro, methyl, ethyl, n-propyl, i-propyl, methoxy, ethoxy, trifluoromethyl, trifluoromethoxy, methylthio, ethylthio, methylsulphonyl or ethylsulphonyl.

or represents benzyl which is optionally substituted by fluorine, chlorine, bromine, methyl, ethyl, n-propyl, i-propyl, methoxy, ethoxy, trifluoromethyl or trifluoromethoxy,

20 or represents furanyl, thiienyl or pyridyl, each of which is optionally substituted by fluorine, chlorine, bromine, methyl or ethyl.

or represents phenoxy-C<sub>1</sub>-C<sub>4</sub>-alkyl which is optionally substituted by fluorine, chlorine, methyl or ethyl, or

represents pyridyloxy-C<sub>1</sub>-C<sub>4</sub>-alkyl, pyrimidyloxy-C<sub>1</sub>-C<sub>4</sub>-alkyl or thiazolyloxy-C<sub>1</sub>-C<sub>4</sub>-alkyl, each of which is optionally substituted by fluorine, chlorine, amino, methyl or ethyl,

5 R<sup>2</sup> represents C<sub>1</sub>-C<sub>14</sub>-alkyl, C<sub>2</sub>-C<sub>14</sub>-alkenyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy-C<sub>2</sub>-C<sub>6</sub>-alkyl or poly-C<sub>1</sub>-C<sub>4</sub>-alkoxy-C<sub>2</sub>-C<sub>6</sub>-alkyl, each of which is optionally substituted by fluorine or chlorine,

10 or represents C<sub>3</sub>-C<sub>6</sub>-cycloalkyl which is optionally substituted by fluorine, chlorine, cyano, nitro, methyl, ethyl, n-propyl, iso-propyl, or methoxy, ethoxy, trifluoromethyl or trifluoromethoxy,

or represents phenyl or benzyl, each of which is optionally substituted by fluorine, chlorine, methyl, ethyl, n-propyl, iso-propyl or methoxy, cyano, nitro, ethoxy, trifluoromethyl or trifluoromethoxy,

15 R<sup>3</sup> represents methyl, ethyl, propyl or isopropyl, each of which is optionally substituted by fluorine or chlorine, or represents phenyl or benzyl, each of which is optionally substituted by fluorine, chlorine, bromine, methyl, ethyl, propyl, iso-propyl, tert-butyl, methoxy, ethoxy, isopropoxy, tert-butoxy, trifluoromethyl, trifluoromethoxy, cyano or nitro,

20 R<sup>4</sup> and R<sup>5</sup> independently of one another represent C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-alkylamino, di-(C<sub>1</sub>-C<sub>4</sub>-alkyl)amino or C<sub>1</sub>-C<sub>4</sub>-alkylthio, each of which is optionally substituted by fluorine or chlorine, or represent phenyl, phenoxy or phenylthio, each of which is optionally substituted by fluorine, chlorine, bromine, nitro, cyano, methyl, methoxy, trifluoromethyl or trifluoromethoxy,

25 R<sup>6</sup> and R<sup>7</sup> independently of one another represent hydrogen, or represent C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>3</sub>-C<sub>6</sub>-cycloalkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>3</sub>-C<sub>4</sub>-alkenyl or C<sub>1</sub>-C<sub>4</sub>-alkoxy-C<sub>2</sub>-C<sub>4</sub>-alkyl, each of which is optionally substituted by fluorine or chlorine, or represent phenyl or benzyl, each of which is optionally substituted by

5                    R<sup>13</sup> represents hydrogen, or represents C<sub>1</sub>-C<sub>4</sub>-alkyl or C<sub>1</sub>-C<sub>4</sub>-alkoxy, each of which is optionally substituted by fluorine or chlorine, or represents C<sub>3</sub>-C<sub>6</sub>-cycloalkyl, or represents phenyl, phenyl-C<sub>1</sub>-C<sub>2</sub>-alkyl or benzyloxy, each of which is optionally substituted by fluorine, chlorine, bromine, methyl, ethyl, iso-propyl, tert-butyl, methoxy, ethoxy, iso-propoxy, tert-butoxy, trifluoromethyl, trifluoromethoxy, nitro or cyano,

R<sup>14</sup> represents hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl, or

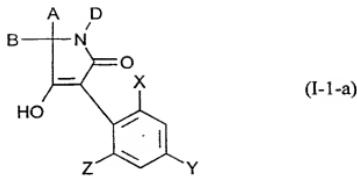
R<sup>13</sup> and R<sup>14</sup> together represent C<sub>4</sub>-C<sub>6</sub>-alkanediyl,

R<sup>15</sup> and R<sup>16</sup> are identical or different and represent methyl or ethyl, or

R<sup>15</sup> and R<sup>16</sup> together represent a C<sub>2</sub>-C<sub>3</sub>-alkanediyl radical which is optionally substituted by methyl, ethyl, n-propyl, iso-propyl, n-butyl, iso-butyl, sec-butyl or tert-butyl, or by phenyl which is optionally substituted by fluorine, chlorine, methoxy, trifluoromethyl, trifluoromethoxy, nitro or cyano.

5.                Process for the preparation of compounds of the formula (I) according to Claim 1, characterized in that

20                (A)        compounds of the formula (I-1-a)

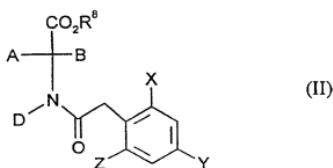


in which

A, B, D, X, Y and Z have the abovementioned meanings,

are obtained when

compounds of the formula (II)



in which

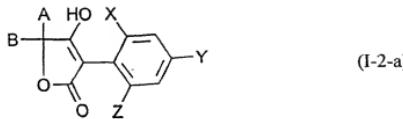
A, B, D, X, Y and Z have the abovementioned meanings

and

10 R<sup>8</sup> represents alkyl,

are subjected to intramolecular condensation in the presence of a diluent and in the presence of a base,

50017955-121101  
5 (B) compounds of the formula (I-2-a)



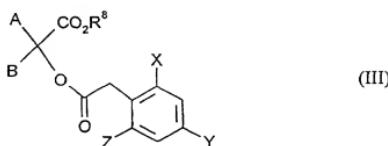
(I-2-a)

in which

A, B, X, Y and Z have the abovementioned meanings,

are obtained when

compounds of the formula (III)



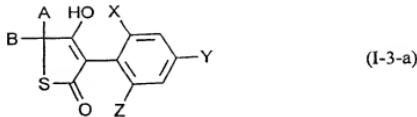
(III)

in which

A, B, X, Y, Z and R<sup>8</sup> have the abovementioned meanings,

10 are subjected to intramolecular condensation in the presence of a diluent and in the presence of a base,

(C) compounds of the formula (I-3-a)

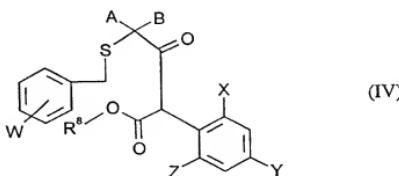


in which

A, B, X, Y and Z have the abovementioned meanings,

are obtained when

compounds of the formula (IV)



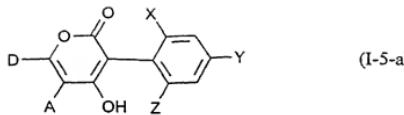
in which

A, B, X, Y, Z and R<sup>8</sup> have the abovementioned meanings and

W represents hydrogen, halogen, alkyl or alkoxy,

are subjected to intramolecular cyclization, if appropriate in the presence of a diluent and in the presence of an acid,

(E) compounds of the formula (I-5-a)



in which

A, D, X, Y and Z have the abovementioned meanings

are obtained when

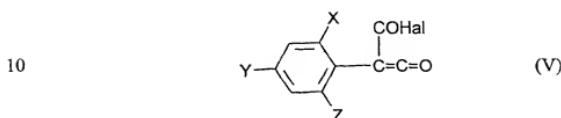
5 compounds of the formula (VIII)



in which

A and D have the abovementioned meanings,

are reacted with compounds of the formula (V)



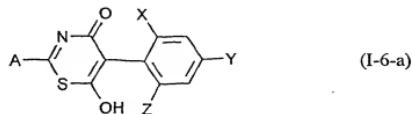
in which

X, Y and Z have the abovementioned meanings and

Hal represents halogen,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid acceptor,

(F) the compounds of the formula (I-6-a)



in which

A, X, Y and Z have the abovementioned meanings,

are obtained when compounds of the formula (IX)

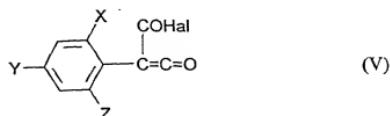


10

in which

A has the abovementioned meaning,

are reacted with compounds of the formula (V)

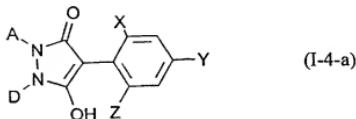


in which

Hal, X, Y and Z have the abovementioned meanings,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid acceptor,

5 and, if appropriate, the resulting compounds of the formulae (I-1-a), (I-2-a) to (I-3-a), (I-5-a) and (I-6-a), or compounds of the formula (I-4-a)



in which

A, D, X, Y and Z have the abovementioned meanings, are in each case reacted

10

(G)  $\alpha$ ) with acid halides of the formula (X)



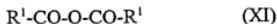
in which

R¹ has the abovementioned meaning and

15 Hal represents halogen

or

5             $\beta)$     with carboxylic anhydrides of the formula (XI)



in which

$R^1$     has the abovementioned meaning,

10            if appropriate in the presence of a diluent and if appropriate in the presence of an acid-binding agent,

or

(H)    are reacted with chloroformic esters or chloroformic thioesters of the formula (XII)



15            in which

$R^2$  and  $M$     have the abovementioned meanings,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid-binding agent,

15            or

(I)     $\alpha)$     are reacted with chloromonothioformic esters or chlorodithioformic esters of the formula (XIII)



in which

M and  $R^2$  have the abovementioned meanings,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid-binding agent,

5

or

β) are reacted with carbon disulphide and subsequently with compounds of the formula (XIV)



in which

$R^2$  has the abovementioned meaning and

Hal represents chlorine, bromine or iodine,

if appropriate in the presence of a diluent and if appropriate in the presence of a base,

or

15 (J) are reacted with sulphonyl chlorides of the formula (XV)



in which

$R^3$  has the abovementioned meaning,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid-binding agent,

or

(K) are reacted with phosphorus compounds of the formula (XVI)



in which

L, R<sup>4</sup> and R<sup>5</sup> have the abovementioned meanings and

Hal represents halogen,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid-binding agent,

10

or

(L) are reacted with metal compounds or amines of the formulae (XVII) or (XVIII)



15

in which

Me represents a mono- or divalent metal,

5

t represents the number 1 or 2 and

R<sup>10</sup>, R<sup>11</sup> and R<sup>12</sup> independently of one another represent hydrogen or alkyl,

if appropriate in the presence of a diluent,

or

(M) α are reacted with isocyanates or isothiocyanates of the formula (XIX)



in which

R<sup>6</sup> and L have the abovementioned meanings,

10

if appropriate in the presence of a diluent and if appropriate in the presence of a catalyst, or

β are reacted with carbamoyl chlorides or thiocarbamoyl chlorides of the formula (XX)



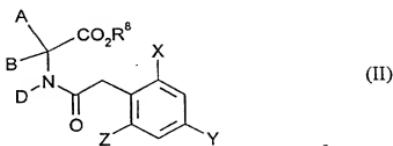
15

in which

L, R<sup>6</sup> and R<sup>7</sup> have the abovementioned meanings,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid-binding agent.

6. Compounds of the formula (II)

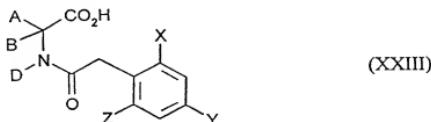


in which

A, B, D, X, Y and Z have the meanings given in Claim 1 and

5 R<sup>8</sup> represents alkyl.

7. Compounds of the formula (XXIII)



in which

A, B, D, X, Y and Z have the meanings given in Claim 1.

10 8. Compounds of the formula (XXII)

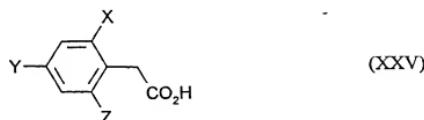


in which

X, Y and Z have the meanings given in Claim 1 and

Hal represents chlorine or bromine.

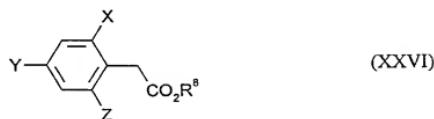
9. Compounds of the formula (XXV)



5 in which

X, Y and Z have the meanings given in Claim 1, with the exception of 2,4-dichloro-6-methylphenylacetic acid.

10. Compounds of the formula (XXVI)

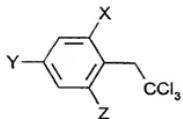


10 in which

X, Y and Z have the abovementioned meanings and

R8 represents alkyl.

11. Compounds of the formula (XXVII)

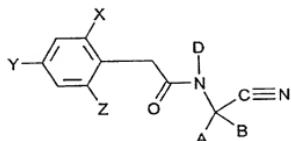


(XXVII)

in which

X, Y and Z have the meanings given in Claim 1.

12. Compounds of the formula (XXXI)

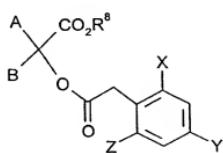


(XXXI)

in which

A, B, D, X, Y and Z have the meanings given in Claim 1.

13. Compounds of the formula (III)



(III)

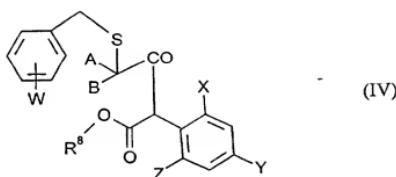
10 in which

A, B, X, Y and Z have the abovementioned meanings and

R<sup>8</sup>

represents alkyl.

14. Compounds of the formula (IV)

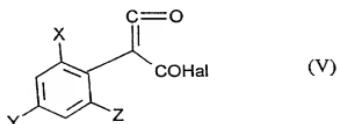


in which

5 A, B, W, X, Y and Z have the meanings given in Claim 1 and .

R<sup>8</sup> represents alkyl.

15. Compounds of the formula (V)

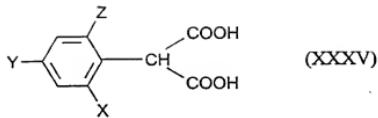


in which

10 X, Y and Z have the meanings given in Claim 1 and

Hal represents chlorine or bromine.

16. Compounds of the formula (XXXV)



in which

X, Y and Z have the meanings given in Claim 1.

10

17. Pesticides and herbicides, characterized in that they comprise at least one compound of the formula (I) according to Claim 1.
18. Use of compounds of the formula (I) according to Claim 1 for combating pests and weeds.
19. Method of combating pests and weeds, characterized in that compounds of the formula (I) according to Claim 1 are allowed to act on pests and/or their environment or on weeds and/or their environment.
20. Process for the preparation of pesticides and herbicides, characterized in that compounds of the formula (I) according to Claim 1 are mixed with extenders and/or surface-active agents.
- 15 21. Use of compounds of the formula (I) according to Claim 1 for the preparation of pesticides and herbicides.